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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,774	10/27/2000	Nouri Allahwerdi	324-009927-US(PAR)	7135

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PERMAN & GREEN
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FAIRFIELD, CT 06824

EXAMINER

TRAN, ELLEN C

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 03/25/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/698,774

Applicant(s)

ALLAHWERDI ET AL.

Examiner

Ellen C Tran

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6, 7, & 8</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2134

DETAILED ACTION

1. This action is responsive to communication: original application filed 27 October 2000 with a foreign priority date of 29 October 1999.
2. Claims 1-19 are currently pending in this application. Claims 1 and 10 are independent claims. Claims 8, 9, 17, 18, and 19 are amended as shown in preliminary amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 2, 4, 8, 10, 11, 13, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al. U.S. Patent No. 6,490,687 (hereinafter '687) in further view of Yu et al., U.S. Patent No. 6,067,621 (hereinafter '621).

As to independent claim 1, "A method of reliably identifying a user in a computer system, in which method a mobile station is used for Communicating with the computer system and a personal identification number is supplied into the mobile station, the method comprising the steps of:" is taught in '687 col. 3, lines 47-50 "A PC-card pager PG, is a PCMCIA card having encryption function and pager function. The PC-card pager PCM has an interface 201 which is designed to be connected to the PC cardslot of a mobile terminal MTJ (here notebook computer)";

“generating a first one-time password in the mobile station without any action by the user by utilizing a known algorithm on the basis of a personal identification number of the user, subscriber-specific identifier read from a subscriber-specific identification module of the mobile station, device-specific identifier of the mobile station ... encoding the first one-time password and the subscriber-specific identifier of the user at the mobile station” is shown by ‘687 col. 3, lines 45-59 “A PC-card pager PG, is a PCMCIA card having encryption function and pager function. The PC-card pager PC_j has an interface 201 which is designed to be connected to the PC card slot of a mobile terminal MT_j ... one-time password ... pager ID”;

“transmitting the encoded password and subscriber-specific identifier to an authentication server of the computer system” is taught in ‘687 col. 5, lines 49-53 “The encrypted authentication information is sent back to the mobile terminal MT_j and is then transmitted to the stationary switched network (stepS312) and further to the host computer 13”;

“identifying the user at the authentication server on the basis of the subscriber-specific identifier, and searching a database for the personal identifier number of the user and the device-specific identifier of the mobile station associated with the user” is shown in ‘687 col. 5, lines 54-67 “the processor 102 compares the decrypted authentication information with the registered authentication information stored in the memory”;

“generating a second one-time password at the authentication server by utilizing the predetermined algorithm on the basis of the personal identification number of the user, subscriber-specific identifier, device-specific identifier of the mobile station” is disclosed in ‘687 col. 6, lines 29-41 “the processor 102 of the host computer 13 reads the pager ID and the one-time password of the authorized user name from the memory 103. Then the processor 102

calculates a Hash value H from the one-time-password using erator 105 according to the Hash value H and then obtains”;

“comparing the first password and the second password with each other at the authentication server, and if the passwords match” is taught in ‘687 col. 6, lines 49-50 “The decrypted authentication information is matched with the registered one”;

“enabling the telecommunication connection between the mobile station of the user and the computer system” is shown in ‘687 col. 7, lines 4-19 “and permits the user to log in to the host computer 13”;

the following is not taught in ‘687 **“and time”** however ‘621 teaches “When the terminal and the server further comprise each counter for synchronizing the terminal with the one-time password is determined” in col. 5 lines 14-17.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the authentication system using mobile stations taught in ‘687 to include a means to synchronize the timing of the authentication server with the mobile station. One of ordinary skill in the art would have been motivated to perform such a modification because in a user authentication system where a real time clock (RTC) challenge response is used the timing must be the same between the user and authentication server see ‘621 (see col. 2, lines 49 et seq.) “In the user authentication method in which the RTC is used, the terminal owned by the user must be synchronized in time with the server of the service provider in order to generate the one-time password and authenticate the user”.

As to dependent claim 2, “wherein the mobile station synchronizes the timing of the mobile station with the timing of the authentication server before the identification

procedure is started” is taught in ‘621 col. 8, lines 10-17 “The password verifier 147 checks whether the received password is identical to the generated password, and verifies the one-time password. The counter memory 145 stores a counter value for synchronizing the terminal 120 with the server 140”.

As to dependent claim 4, “wherein the authentication server transmits no information to the mobile station if the first and the second passwords do not match” is disclosed in ‘687 col. 6, lines 1-2 “If the decrypted authentication information does not match the registered one, the login is rejected”.

As to dependent claim 8 “wherein information necessary for encryption is stored in the terminal in more than one subscriber-specific identification module” is taught in ‘687 col. 3, lines 1-3 “Further, the respective authorized users have PC-card pager PG_1 - PG_N and mobile or portable terminals MT_1 - MT_N such as notebook computers”.

As to independent claim 10, “An arrangement for reliably identifying a user in a computer system, which arrangement comprises a mobile station used for communicating with the computer system, the mobile station comprising a subscriber-specific identification module comprising a subscriber-specific identifier, a device-specific identifier permanently encoded in the mobile station, means for reading a personal identifier number which is supplied by the user and which enables the device to be used” is disclosed in ‘687 col. 3, lines 1-14 “In other words, by connecting the PC-card pager of the authorized user to the mobile terminal, the user can also log in to the host computer 13 outside the office building 10”;

“means for checking the correctness of the identifier number always before the device is put to use which arrangement comprises an authentication server comprising

memory means for storing the user names of the users in the system and the corresponding personal identifiers and device-specific identifiers” is taught in ‘687 col. 3, lines 31-35 “The host computer 1 further includes a memory 103 for storing authorized user name information, an encryption table 104, and a random number generated (RNG) 105”;

“the mobile station further comprising means for generating a first one-time password without any action by the user by utilizing a known algorithm on the basis of the personal identification number of the user, subscriber-specific identifier read from a subscriber-specific identification module of the mobile station, device-specific identifier of the mobile station ... means for encoding the first one-time password and the subscriber-specific identifier of the user” is shown by ‘687 col. 3, lines 45-59 “A PC-card pager PG, is a PCMCIA card having encryption function and pager function. The PC-card pager PC_J has an interface 201 which is designed to be connected to the PC card slot of a mobile terminal MT_J ... one-time password ... pager ID”;

“means for transmitting the encoded password and subscriber-specific identifier to an authentication server of the computer system” is taught in ‘687 col. 5, lines 49-53 “The encrypted authentication information is sent back to the mobile terminat MT_J and is then transmitted to the stationary switchd network (stepS312) and further to the host computer 13”;

“the authentication server is further arranged to identify the user on the basis of the subscriber-specific identifier, and search a database for the personal identifier number of the user and the device-specific identifier of the mobile station associated with the user” is shown in ‘687 col. 5, lines 54-67 “the processor 102 compares the decrypted authentication information with the registered authentication information stored in the memory”;

“generate a second one-time password at the authentication server by utilizing the predetermined algorithm on the basis of the personal identification number of the user, subscriber-specific identifier, device-specific identifier of the mobile station” is disclosed in ‘687 col. 6, lines 29-41 “the processor 102 of the host computer 13 reads the pager ID and the one-time password of the authorized user name from the memory 103. Then the processor 102 calculates a Hash value H from the one-time-password using erator 105 according to the Hash value H and then obtains”;

“compare the first password and the second password with each other at the authentication server, and if the passwords match” is taught in ‘687 col. 6, lines 49-50 “The decrypted authentication information is matched with the registered one”;

“enable the telecommunication connection between the mobile station of the user and the computer system” is shown in ‘687 col. 7, lines 4-19 “and permits the user to log in to the host computer 13”

the following is not taught in ‘687 **“and time”** however ‘621 teaches “When the terminal and the server further comprise each counter for synchronizing the terminal with the one-time password is determined ” in col. 5 lines 14-17.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the authentication system using mobile stations taught in ‘687 to a means to synchronize the timing of the authentication server with the mobile station. One of ordinary skill in the art would have been motivated to perform such a modification because in a user authentication system where a real time clock (RTC) challenge response is used the timing must be the same between the user and authentication server see ‘621 (see col. 2, lines 49 et seq.) “In

the user authentication method in which the RTC is used, terminal owned by the user must be synchronized in time with the server of the service provider in order to generate the one-time password and authenticate the user”.

As dependent claim 11, 13, and 19 these claims incorporate substantially similar subject matter as in cited in the claims 2, 4, and 8 above and are rejected along the same rationale.

5. **Claims 3 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over ‘687 in further view of ‘621 in further view of Dynarski et al. U.S. Patent No. 6,466,571 issued 15 October 2002 (hereinafter ‘571).

As to dependent claim 3, the following is not taught in the combination of teachings of ‘687 and ‘621 **“wherein the user is identified automatically when the user starts an application utilizing the computer system in the mobile station”** however ‘571 teaches “The home agent uses the identification information to locate, page and automatically connect the device via the network access server” in col. 3, lines 4-31.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the authentication system using mobile stations with a synchronizing means taught in the combination of ‘687 and ‘621 to include a means to allow the user to be identified automatically. One of ordinary skill in the art would have been motivated to perform such a modification because automatically connecting to a network allows more user flexibility see ‘571 (see col. 2, lines 18 et seq.) “The present invention attempts to overcome these problems and provide a simple, efficient and automatic way of finding a mobile user”.

As dependent claim 12, this claim incorporates substantially similar subject matter as in cited in the claim 3 above and is rejected along the same rationale.

6. **Claims 5-7, 9 and 14-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over '687 in further view of '621 in further view of Dynarski et al. U.S. Patent No. 6,628,671 issued 30 September 2003 (hereinafter '671).

As to **dependent claim 5**, the following is not taught in the combination of teachings of '687 and '621 **“wherein during the identification, the terminal transmits to the authentication server a message comprising at least a field comprising a SRES value, a field comprising time, a field comprising an international telephone number of the terminal, and a field comprising a device number of the terminal”** however '671 teaches “The Call Control Task 114 maintains a list of dynamic call database (DCD) records ... Each record contains a collection of information on a per call basis, such as access information into fram relay task for communications with the CBSC and with the MARC card; session Ids; the Mobile IMSI/MIN, and ESN numbers for the mobile device; the CBSC Number; a CBSC identifier for the last active packet data session” in col. 12, line 60 through col. 13 line 17.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the authentication system using mobile stations with a synchronizing means taught in the combination of '687 and '621 to include a means to recognize mobile stations based on their PPP. One of ordinary skill in the art would have been motivated to perform such a modification because losing coverage in wireless connection is a common occurrence see '671 (see col. 2, lines 14 et seq.) “The known prior art has failed to recognize that if a PPP session for a user goes dormant and the user then connects of different IWU (or to a different port in the same IWU), that the PPP negotiated parameter and the state for a call which is currently going dormant can be used to make the new PPP connection”.

As to dependent claim 6 and 7 “wherein during the identification, a PPP/CHAP protocol is used in connection with a RADIUS protocol, and the terminal transmits to the authentication server a message comprising at least a field comprising a SRES value, a field comprising a user name to the system, and a field comprising a password generated from a device identifier, sub-scriber-specific identifier of the user, personal identification number of the user, time and the SRES value” and “wherein during the identification, a PPP/PAP protocol is used in connection with the RADIUS protocol, and the terminal transmits to the authentication server a message comprising at least a field comprising a password generated from the device identifier, subscriber-specific identifier of the user, personal identification number of the user, time, and SRES value, a field comprising a SRES value, and a field comprising a user number to the system” is taught in ‘671 col. 3 lines 55-62 “The authorization server, for example a RADIUS authentication, authorization and accounting server, responsively issues an access-accept message to the network access server”.

As to dependent claim 9 “wherein the user name to the system is the user's MSISDN” is shown in ‘671 col. 3, lines 48-52 “uniquely identifying the device (such as an International Mobile System Identification number (IMSI)”.

As to dependent claim 18, “wherein the mobile station is a GPRS system mobile station” is disclosed in ‘671 col. 3, lines 41-47 “In one possible example, the first PPP session ...a second radio tower in the wireless communication network”.

As dependent claim 14, 15, 16 and 17 these claims incorporate substantially similar subject matter as in cited in the claims 5, 6, 7. and 9 above and are rejected along the same rationale.


Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen C Tran whose telephone number is (703) 305-8917. The examiner can normally be reached on 6:30 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A Morse can be reached on (703) 308-4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5484.

Ellen Tran
Patent Examiner
Technology Center 2134
16 March 2004


GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100